stryker

Medical

Prime TC® Transport Chair Designed to be Easier to Clean

Situation

Hospital floors become contaminated with microorganisms from settling airborne bacteria by contact with shoes, wheels and other objects. The removal of such microbes is a component in controlling the healthcare-associated infections that can cost up to $45 billion per year in the US.[1] Furthermore, in an investigation of the cleaning of hospital floors, the CDC found that just a few hours after floor disinfection, the bacterial count was nearly back to the pre-treatment level.[2]

The wheelchair is one of the only pieces of equipment within a hospital that is utilized by nearly every department and nearly every patient. With the widespread use and important role that seated transport plays in the hospital setting, many are surprised to learn that the wheelchair was not designed for the hospital environment. Being the industry leader in patient mobility, Stryker Medical, in collaboration with the Michael Graves Design Group, redesigned this outdated piece of patient transport equipment with microbial contamination in mind.

Technology

The Stryker Prime TC Transport Chair has several features that help to enhance a hospital's cleaning and disinfection procedures. Prime TC is made with a molded plastic, seamless design and powder-coated steel that eliminates fabric rips and reduces the risk of rust that can be difficult to clean. Foot operated flip-up footrests and a foot operated braking system allow for reduced bending and help prevent the transfer of germs and debris from touching dirty footrests and brakes. Prime TC is also power-washable which helps to make cleaning quick and easy.

Methodology

Lexamed, a third party biomedical testing laboratory, compared and assessed the build-up of soil on the Stryker Prime TC Transport Chair vs. a traditional wheelchair over the course of 25 cleaning cycles. The chairs were contaminated with a riboflavin solution (representing a simulated soil) and cleaned using a standard healthcare facility procedure utilizing CaviWipes. The units were evaluated for residual riboflavin using fluorescence testing, and photographed throughout the 25 cycles.

Results

Overall, the Prime TC Transport Chair proved to be easier and more effectively cleaned than a traditional wheelchair typically found in a hospital setting. Specifically, the armrest, push handles, and seat were easier to clean on the Prime TC Transport Chair as compared to a standard wheelchair design. These areas showed little-to-no riboflavin build-up over time on the Prime TC Transport Chair.

Conclusion

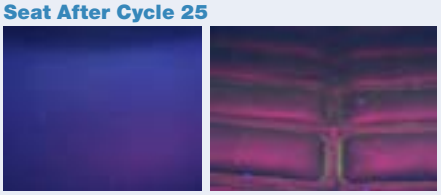
Properly and effectively cleaning the seated transport device, a device that is frequently used throughout the hospital, is an important part of a hospital's cleaning and disinfection procedures. Lexamed concluded that the Stryker Prime TC Transport Chair is easier to clean than the traditional wheelchair.

LEXAMED Quality • Science • Innovation

Armrest After Cycle 25

Prime TC Transport Chair | Traditional Wheelchair

Seat After Cycle 25



Prime TC Transport Chair | Traditional Wheelchair

Push Handle After Cycle 25

Prime TC Transport Chair | Traditional Wheelchair

Residual riboflavin is shown as a bright blue/green against Prime TC Transport chair, and a bright green against the wheelchair.

1. The Direct Medical Costs of Healthcare-Associated infections in US Hospitals and the Benefits of Prevention: Centers for Disease Control and Prevention. http://www.cdc.gov/hai/pdfs/hai/ scott_costpaper.pdf.

2. Guideline for Disinfection and Sterilization in Healthcare Facilities: Centers for Disease Control and Prevention. http://www.cdc.gov/hicpac/pdf/ guidelines/Disinfection_Nov_2008.pdf.

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